

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently Amended) A method of manufacturing a glycoprotein having a [mammalian-type or human-type] sugar chain, comprising a step in which a transformed plant cell is produced by introducing to a plant cell a gene encoding a [glycosyltransferase] mammalian β 1,4-galactosyltransferase enzyme and a gene of an exogenous glycoprotein, and a step in which the produced transformed plant cell is cultivated.

2. (Currently Amended) The method according to claim 1, wherein the [glycosyltransferase] β 1,4-galactosyltransferase enzyme is an enzyme which transfers a galactose residue to a non-reducing terminal acetylglucosamine residue.

3. (Currently Amended) The method according to claim 1, wherein the glycoprotein [with a mammalian-type or human type] sugar chain comprises a core sugar chain and an outer sugar chain, wherein the core sugar chain comprises a plurality of mannose and acetylglucosamine residues, and wherein the outer sugar chain contains a terminal sugar portion with a non-reducing terminal galactose.

4. (Original) The method according to claim 3, wherein the outer sugar chain has a straight chain configuration.

5. (Original) The method according to claim 3, wherein the outer sugar chain has a branched configuration.

6. (Original) The method according to claim 5, wherein the branched sugar chain portion has a mono-, bi-, tri, or tetra-configuration.

7. (Cancelled)

8. (Currently Amended) A transformed plant cell having a sugar chain adding mechanism comprising a mammalian β 1,4-galactosyltransferase enzyme which [can conduct a transfer reaction of] transfers a galactose residue to a non-reducing terminal acetylglucosamine residue, wherein the sugar chain adding mechanism adds a sugar chain containing a core sugar chain and an outer sugar chain, wherein the core sugar chain comprise a plurality of mannose and acetylglucosamine residues, and wherein the outer sugar chain contains a terminal sugar chain portion with a non-reducing terminal galactose.

9. (Currently Amended) The transformed plant cell according to claim 8, wherein the plant cell is transformed with a the gene of a first enzyme which transfers a galactose residue to a non-reducing terminal acetylglucosamine residue and [the] a gene of a second enzyme [which can improve the performance of the first enzyme].

10. (Previously Amended) The transformed plant cell according to claim 9, wherein the second enzyme is selected from the group consisting of Mannosidase I, Mannosidase II, and N-acetylyglycosaminyltransferase I (GlcNAc I).

11. (Previously Amended) A transformed plant regenerated from the plant cell of claim 8.

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Currently Amended) A method of manufacturing a glycoprotein, which method includes introducing into a plant cell a gene encoding a [glycosyltransferase enzyme of human origin selected from the group consisting of galactosyltransferase, galactosidase and β -galactosidase] β 1,4-galactosyltransferase of human origin and further introducing a gene encoding an exogenous glycoprotein selected from [one or more of] the group consisting of enzymes, hormones, cytokines, antibodies, vaccines, receptors and serum proteins, the glycoprotein produced including a core sugar chain including a plurality of mannose and acetylglucosamine residues, and an outer sugar chain containing a terminal sugar chain portion with a non-reducing terminal galactose[, and wherein the glycoprotein produced has no fucose or xylose linked to one or more of the core sugar chain, the outer sugar chain and the terminal sugar chain].

16. (Currently Amended) The method according to claim 15, which method further includes introducing a gene encoding a second enzyme [capable of enhancing the efficiency of the glycosyl transferase enzyme].

17. (Previously Amended) The method according to claim 16, wherein the second enzyme is selected from the group consisting of Mannosidase I, Mannosidase II, and N-acetylglycosaminyltransferase I (GlcNAc I).

18. (Previously Amended) The method according to claim 15, wherein the exogenous glycoprotein encoded by the introduced gene is an enzyme selected from one or more of the group consisting of horseradish peroxidase, kinase, glucocerebrosidase, α -galactosidase, tissue-type plasminogen activator (TPA), and 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase.

19. (Previously Amended) The method according to claim 15, wherein the exogenous glycoprotein encoded by the introduced gene is a hormone or cytokine selected from one or more of the group consisting of enkephalin, interferon-alpha, granulocyte-macrophage colony stimulating factor (GM-CSF), granulocyte colony stimulating factor (G-CSF), chorion stimulating hormone, interleukin-2, interferon-beta, interferon-gamma, erythropoietin, vascular endothelial growth factor, human choriogonadotropin (HCG), leuteinizing hormone (LH), thyroid stimulating hormone (TSH), prolactin, and ovary stimulating hormone.

20. (Previously Amended) The method according to claim 15, wherein the exogenous glycoprotein encoded by the introduced gene is an antibody selected from immunoglobulin G (IgG) or single chain variable region antibody fragments (scFV).

21. (Currently Amended) The method according to claim 15, wherein the plant cell is [derived] from a plant selected from the group consisting of plants in the families of *Solanaceae*, *Poaceae*, *Brassicaceae*, *Rosaceae*, *Leguminosae*, *Curcubitaceae*, *Lamiaceae*, *Liliaceae*, *Chenopodiaceae*, and *Umbelliferae*.

22. (Currently Amended) The method according to claim 21, wherein the plant cell is [derived] from a plant selected from the group consisting of tobacco, tomato, potato, rice, maize, radish, soybean, peas, alfalfa, [or] and spinach.

23. (Cancelled)

24. (Cancelled)

25. (New) The method according to claim 1, wherein the mammalian β 1,4-galactosyltransferase is a human β 1,4-galactosyltransferase.